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[5018]-306**T.Y. B.Sc. (Computer Science) (Third Semester)****EXAMINATION, 2016****COMPUTER SCIENCE****Paper VI****(CS-336 : Object Oriented Software Engineering)****(2013 PATTERN)****Time : Two Hours****Maximum Marks : 40**

- N.B. :—**
- (i) All questions are compulsory.
 - (ii) All questions carry equal marks.
 - (iii) Figures to the right indicate full marks.
 - (iv) Neat diagrams must be drawn wherever necessary.

1. Attempt *all* of the following : [10×1=10]
- (a) "Objects have state behaviour and unique identity." State true or false. Justify.
 - (b) Define an object "Credit Card" with possible attributes and visibility.
 - (c) Give any *two* disadvantages of UML.
 - (d) What is use of package diagram ?
 - (e) How to partition the activity diagram ?
 - (f) Define Elaboration.

(g) Define collaboration.

(h) What is meant by stub ?

(i) What is inheritance ?

(j) What is meant by Recursive Association ?

2. Attempt any *two* of the following : [2×5=10]

(a) Explain any *five* artifacts and issues considered during Inception.

(b) Discuss any *five* components of the sequence diagram.

(c) What is aggregations ? Explain multilevel aggregation with suitable example.

3. Attempt any *two* of the following : [2×5=10]

(a) Write a note on Jacobson method.

(b) What are components of deployment diagram ? Explain common uses of deployment diagram.

(c) Draw a class diagram for "mobile company". They have different distributors at different areas. Different facilities are provided such as incoming calls free, sending E-mails, songs can be seen etc.

4. (A) Bank of India provides fixed deposit (FD) schemes through which people can deposit money for a certain period of time. The bank pays interest for this period and returns money

when FD period is over. Interest rate depends upon the period. The depositor may choose to renew FD and may get loan against deposits.

Consider the above case and draw the following diagrams :

(i) Use case diagram [3]

(ii) Sequence diagram. [4]

(B) Compare between Alpha and Beta testing. [3]

Or

In a restaurant, a customer gets menu card, choose menu item and confirms the order. Draw state transition diagram for it.

[3]

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[5116]-306**T.Y. B.Sc. (Computer Science) (Third Semester)****EXAMINATION, 2017****CS-336 : OBJECT ORIENTED SOFTWARE ENGINEERING****(2013 PATTERN)****Time : Two Hours****Maximum Marks : 40**

N.B. :— (i) Neat diagrams must be drawn wherever necessary.

(ii) Figures to the right indicate full marks.

(iii) All questions carry equal marks.

(iv) All questions are compulsory

1. Attempt all of the following :

[10×1=10]

(a) Write any *two* benefits of the object oriented programming.

(b) Define an object "Saving Account" with possible attributes and operations with visibility.

(c) "UML is a pure visual programming language." State T/F. Justify.

(d) Define Association.

(e) What is use cases ?

(f) Name any *two* phases of Iterative development process.

(g) What do you meant by components ?

P.T.O.

- (h) Define Alpha testing.
- (i) "A class is object types." State T/F. Justify.
- (j) What is meant by protected visibility ?

2. Attempt any *two* of the following :

[2×5=10]

- (a) Explain elaboration with some key ideas and best practices.
- (b) What is use of deployment diagram ? Explain it with suitable example.
- (c) Differentiate between aggregation and generalization with suitable examples.

3. Attempt any *two* of the following :

[2×5=10]

- (a) Write a note on Booch method.
- (b) Define collaboration. Explain structural aspects of a collaboration.
- (c) Prepare a class diagram giving attributes and operations for stack and queue implementation using linked list.

4. Attempt the following :

- (a) Library system of a University is to be computerized. The members can be students, University departments and colleges affiliated to the university. The information about available books should be available with all these members. The student has to return book within 15 days and is charged fine for the delay. Number of books that can be issued to him are restricted

to five. If the books are not available or copies are not available, the member can issue demand requests which are used for procurement of books. Dealers send list of new books, which are categorized according to subject and subjectwise list is then sent to respective department for approval. Approved books are then procured.

Consider the above case and draw the following diagrams :

(1) Use case diagram. [3]

(2) Sequence diagram. [4]

(b) What is integration testing ? Explain role of stub. [3]

Or

Draw component and deployment diagram for e-mail system.

[3]

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T.Y. B.Sc. (Computer Science) (III Sem.) EXAMINATION, 2016
COMPUTER SCIENCE

Paper VI

CS-336 : Object-Oriented Software Engineering
(2013 PATTERN)

Time : Two Hours

Maximum Marks : 40

- N.B. :-**
- (i) Neat diagrams must be drawn wherever necessary.
 - (ii) Figures to the right indicate full marks.
 - (iii) All questions carry equal marks.
 - (iv) All questions are compulsory.

1. Attempt *all* of the following : [10×1=10]
- (a) What do you mean by organizing the objects ?
 - (b) Define an object "Debit Card" with possible attributes and operations with visibility.
 - (c) What do you mean by qualified association ?
 - (d) Give any *two* names of the initial researchers.
 - (e) What is meant by N-Ary association ?
 - (f) Which symbol is used to define a node ?
 - (g) What is the use of Swimlanes ?
 - (h) Define inception.

- (i) Define Deployment Component.
- (j) Give any *two* attributes of a good test case ?

2. Attempt any *two* of the following : [2×5=10]

- (a) What is relationship ? Explain dependency relationship with example.
- (b) What is package ? Explain it with import and export stereotype.
- (c) Discuss components of use case diagram.

3. Attempt any *two* of the following : [2×5=10]

- (a) How to model an embedded system ?
- (b) Explain Top-down testing and give its advantages.
- (c) A hospital is having words such as general, special and ICU. Patients admitted to words as per their choice. Doctor treats the patients. Draw a class diagram for this applying relationship association with multiplicity. Use generalization and aggregation.

4. Attempt the following :

- (A) The Government announces a scheme for fertilizer subsidy for Indian Farmers where application are invited online. Many farmers has to apply and provide complete details with various documents such as Adhar Card, 7/12 certificate and bank details.

Applicants can first register on the site then Government authorities gives One Time Password (OTP) on mobile to verify the applicants. After successful registration applicants can add, edit, delete and upload documents as and when required. After final submission Government authorities e-verify the documents and allowed or disallowed the subsidy for farmers.

Consider the above case and draw the following diagrams :

(1) Use case diagram [3]

(2) Activity diagram. [4]

(B) What is Elaboration ? State the significant of elaboration. [3]

Or

(B) Prepare state transition diagram for stack implementation using linked list. [3]